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## ***Technical guidance for Assessing Physical and Cultural Heritage or any Structure, Site or Thing that is of Historical, Archeological, Paleontological or Architectural Significance under the Canadian Environmental Assessment Act, 2012***

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**May 2014**

### **Disclaimer**

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This technical guidance is for information purposes only. It is not a substitute for the [Canadian Environmental Assessment Act, 2012](#) (CEAA 2012) or its regulations. In the event of any inconsistency between this technical guidance and CEAA 2012 or its regulations, CEAA 2012 or its regulations, as the case may be, would prevail.

### **Purpose**

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This technical guidance document supports the implementation of CEAA 2012 provisions related to the effects of any changes to the environment on physical and cultural heritage or on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance. It provides preliminary guidance on how to conduct the assessment when the Canadian Environmental Assessment Agency (the Agency) is the responsible authority.

The technical guidance informs the preparation of directives by the Agency, such as the Environmental Impact Statement (EIS) Guidelines, and serves as core guidance to project proponents. It also provides direction to Agency employees throughout the environmental assessment (EA) of a designated project in their interactions with those engaged in federal EA, such as proponents, federal authorities, other jurisdictions, review panel members, Aboriginal groups and the public.

In combination with the EIS Guidelines, the technical guidance aims to ensure that CEAA 2012 requirements related to physical and cultural heritage or to any structure, site or thing that is of historical, archaeological, paleontological or architectural significance are met in order to achieve a high quality EA of a designated project.

### **Application**

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The technical guidance is intended for use in the EA of a designated project for which the Agency is the responsible authority. For further certainty, this technical guidance does not apply to EAs conducted by other responsible authorities under CEAA 2012.

In the technical guidance, "project EA" refers to the EA of a designated project under CEAA 2012.

Throughout the technical guidance, the term "environmental effects" refers to environmental effects as described in section 5 of CEAA 2012. As well, "physical and cultural heritage" is hereafter referred to as heritage, and "any structure, site or thing that is of historical, archaeological, paleontological or architectural significance" is referred to as any structure, site or thing.

The technical guidance should be used to inform the preparation of the EIS Guidelines and the EIS for a designated project. It should be used in conjunction with other Agency policy and guidance instruments. For an EA by a review panel, additional guidance and direction may be provided in the Terms of Reference or Joint Review Panel Agreement.

For application under CEAA 2012, this guidance replaces the Agency's 1996 guide entitled, [\*Reference Guide on Physical and Cultural Heritage Resources\*](#). The 1996 guide will continue to be applicable for project EAs initiated under the former *Canadian Environmental Assessment Act* that are still being conducted pursuant to the transitional provisions of CEAA 2012.

## **Relevant Provisions of CEAA 2012**

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CEAA 2012 aims to protect components of the environment that are within federal legislative authority from significant adverse environmental effects caused by a designated project, including cumulative environmental effects. In addition, CEAA 2012 ensures that a designated project is considered in a careful and precautionary manner to avoid significant adverse environmental effects, when the exercise of a power or performance of a duty or function by a federal authority under any Act of Parliament is required for the designated project to be carried out. Sections of CEAA 2012 that are most relevant to assessing the effects of any changes to the environment on heritage or any structure, site or thing can be found in Appendix 1.

This technical guidance addresses 5(1)(c)(ii) "physical and cultural heritage" and 5(1)(c)(iv) "any structure, site or thing that is of historical, archeological, paleontological or architectural significance". It also addresses 5(2)(b)(ii) "physical and cultural heritage" and 5(2)(b)(iii) "any structure, site or thing that is of historical, archeological, paleontological or architectural significance".

Subsection 19(1) of CEAA 2012 clarifies that environmental effects include cumulative environmental effects and environmental effects of accidents and malfunctions. This subsection also stipulates the factors that are to be taken into account for a project EA. For example, factors related to determining the significance of environmental effects, selecting mitigation measures and implementing a follow-up program also apply. The assessment may also take into account community and Aboriginal traditional knowledge, as per subsection 19(3).

## **Considerations in Examining Heritage or Any Structure, Site or Thing**

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### ***Understanding Heritage or Any Structure, Site or Thing***

A land or resource (e.g., an artifact, object or place) that is considered as heritage or any structure, site or thing is distinguished from other lands and resources by the value placed on it. The value of heritage or any structure, site or thing originates from its:

- Association with one or more important aspects of human history or culture;
- Historical, archaeological, paleontological or architectural significance; and
- Association with a particular group's practices, traditions or customs.

Practices, traditions and customs are generally defined as follows:

- Practice: a way of doing something that is common, habitual or expected;
- Tradition: a custom, opinion or belief handed down primarily orally or by practice; and
- Custom: a particular, established way of behaving.

Heritage or any structure, site or thing may be movable (e.g., tools) or immovable (e.g., cultural landscape), above (e.g., historic building) or below ground (e.g., burial ground), and on land (e.g., Quebec City's walls and fortifications) or in water (e.g., shipwreck). The features of these resources may be natural (e.g., Waterton-Glacier International Peace Park) or fabricated (e.g., pottery), or a combination of both (e.g., culturally modified trees). Additional examples of heritage or any structure, site or thing can be found in Appendix 2.

Heritage is an inclusive term that is associated with important aspects of human history and culture. Contemporary perceptions of heritage tend to be broad and encompass various social, economic, political, environmental, scientific, natural and cultural dimensions. In addition, the concept of cultural landscapes is often used to describe any geographical area that has been modified, influenced, or given special cultural meaning by people (more information on cultural landscapes can be found in Appendix 2).

A specific land or resource that has heritage value will most likely also be considered a structure, site or thing that is of historical, archaeological, paleontological or architectural significance. For Aboriginal groups, lands and resources identified as heritage or any structure, site or thing may also fit under current use of lands and resources for traditional purposes, identified under 5(1)(c)(iii). Spiritual and cultural practices of Aboriginal Groups' are often integrally linked to specific locations and surrounding landscape features, as well as objects of social significance.

### ***Approach to Examining Heritage or Any Structure, Site or Thing in an EA***

A project EA first examines any changes to the environment that may be caused by a designated project, and then subsequently considers how these changes to the environment may affect heritage or any structure, site or thing.

A project EA considers the effects of any change to the environment on heritage or any structure, site or thing with respect to Aboriginal peoples. The EA also considers the effects of any changes to the environment on heritage or any structure, site or thing that are directly linked or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function (i.e., a federal decision).

The practice of EA calls for examining potential environmental effects of the designated project on valued components (VCs) and considering mitigation measures. Mitigation measures are taken into account prior to determining the significance of adverse environmental effects for the EA decisions and for the implementation of the follow-up program.

The approach and level of effort applied to assessing effects of any changes to the environment on heritage or any structure, site or thing in a project EA are established on a case-by-case basis taking into consideration:

- The characteristics of the designated project;
- The potential environmental effects;
- The intactness and context of VCs that may be impacted by the environmental effects;
- The potential for mitigation and the extent to which mitigation measures may address potential environmental effects; and
- The level of concern expressed by Aboriginal groups or the public.

Assessment of environmental effects should include the five steps described below. Appendix 3 provides a reference sheet summarizing the five steps.

The steps are iterative; circumstances commonly arise during the course of an assessment that requires these steps to be revisited. EA documentation must clearly explain and justify the methodologies that have been used to assess the effects of any changes to the environment on heritage or any structure, site or thing.

Different types of heritage, structure, site or thing can fall under the authorities of municipal, provincial/territorial or federal governments and sometimes under several of these authorities. Information from other governments may be used to inform federal EAs.

### **Step 1. Initial Scoping**

Scoping is an iterative process. Initial scoping for the project EA is made in relation to section 5 of CEAA 2012 and takes into account direction provided by the Agency (e.g., in the EIS Guidelines). As the project EA advances, information gained, such as evidence on potential or confirmed heritage or any structure, site or thing, may help clarify what needs to be considered and to what extent.

Initial scoping should cover the following aspects: identifying VCs, listing potential effects and determining spatial and temporal boundaries.

#### ***Identifying valued components***

Identifying VCs involves making an inventory of potential lands and resources and establishing their importance as heritage or as a structure, site or thing. This may be assessed through a combination of consultation, desk-based research and a site survey or inspection, potentially with test excavations. Desk-based research may involve identifying major historical themes and activities through historical research and a review of topographical and historical mapping.

Possible sources of information to assist in identifying places where heritage or any structure site or thing that are valued may be present are:

- lists of national parks, national historic sites, national marine conservation areas, national urban parks and national historic canals;
- Commemorative Integrity Statement (for national historic sites);
- Cultural Resource Value Statement (for national parks, national marine conservation areas and national urban parks);

- federal and provincial registers of archaeological sites;
- Canadian Register of Historic Places;
- Federal Heritage Buildings Review Office;
- Directory of Federal Heritage Designations;
- federal and provincial government departments responsible for heritage issues;
- Aboriginal peoples;
- academic and research institutions;
- professional societies and organizations;
- federal, provincial and municipal archives and libraries;
- museums;
- photographs and maps;
- land use plans;
- local citizens, associations, and municipal government departments involved in the area of heritage conservation and protection; and
- International Council on Monuments and Sites Canada.

Some lands and resources will be easy to identify as heritage or any structure, site or thing for they are already recognized by one or more jurisdictions (e.g., federal, provincial, territorial, municipal or Aboriginal jurisdictions). However, some lands and resources may not be formally recognized or documented. As such, these lands and resources may need to be evaluated first to understand their importance as heritage or as a structure, site or thing.

Stakeholders, professional experts, Aboriginal groups, the public, government and non-government organizations can be important sources of information in identifying and evaluating these lands and resources. In evaluating the importance of potential heritage or any structure, site or thing, considerations may include the following:

- **Context:** A land or resource may not appear significant on its own. However, considering its historical and physical context, thematic representativeness and information content (such as richness, cultural and ethnic significance) may provide great insight into its value. Relevant background information may include historical events. Key characteristics of the area may also provide insight into the value of the lands and resources.
- **Intactness:** The degree of intactness of the land or resource is evaluated, including the level to which it has been disturbed or is preserved. Such an evaluation requires data on the previous condition of the land or resource, which may not always be available or documented.
- **Evidence:** Some types of sites, such as archaeological sites, are not visible. It is therefore important to confirm the presence of these sites in order to assess any impacts on them. For example, the sacred grounds of Aboriginal peoples may have no evidence of physical activity, but may be associated with the creation of legends, ceremonial functions, personal vision quests, puberty rites, etc.
- **Places:** Aboriginal spiritual and cultural practices are often integrally linked to specific locations and landscape features. Environmental effects resulting from a designated project may impact these places, which may in turn limit the ability of Aboriginal peoples to engage in their spiritual and cultural practices.

Examples of questions that should be considered in identifying VCs include:

- Are there any lands and resources that are recognized to have archaeological, historical, paleontological, architectural, scientific, engineering, natural or cultural value within the study area?
- Has any exploratory work been previously undertaken to identify resources such as archaeological sites or artifacts in the study area?
- What lands and resources are valued by a group or community?

During initial scoping, a VC may be identified at a broad level (e.g., paleontological resources) or at a more specific level (e.g., fossils). The consideration of the effects of the project will generally involve an examination of the specific features of the VC.

### ***Listing potential effects***

The term “environmental effect”, defined in Section 5 of CEEA 2012, addresses heritage or any structure, site or thing from two perspectives:

- With respect to Aboriginal peoples, an effect occurring in Canada of any change that may be caused to the environment on heritage or any structure, site or thing (e.g., disturbance to rock art); and
- Effects of any changes to the environment on heritage or any structure, site or thing (other than those mentioned in the previous bullet) that are directly linked or necessarily incidental to a federal decision (e.g., disturbance to a designated heritage lighthouse).

The following questions could be considered in listing potential effects on heritage or any structure, site or thing:

- What are the changes to the environment that may be caused by a designated project?
- How will these changes to the environment affect heritage or any structure, site or thing?
- Are there cumulative effects that will affect the identified heritage or any structure, site or thing?
- What are the public concerns associated with the potential effects?

### ***Determining spatial and temporal boundaries***

The spatial and temporal boundaries are set to allow for analysis of potential environmental effects, selection of mitigation measures and determination of significance. In the case of heritage or any structure, site or thing, setting these boundaries takes into account the nature of the VC and the changes to the environment that may affect the VC.

In addition, the spatial and temporal boundaries may change when assessing potential cumulative environmental effects. For additional information on establishing boundaries associated with cumulative environmental effects, please refer to the [Operational Policy Statement on Assessing Cumulative Environmental Effects](#) under CEEA 2012.

Overall, the boundaries of an assessment should be large enough to encompass the potential effects of any changes to the environment on heritage or any structure, site or thing, including

cumulative effects. In many cases, it is appropriate to consult with Aboriginal groups and the public in making this determination.

## Step 2. Analysis

The objective of the analysis phase is to describe how the potential changes to the environment caused by a designated project may affect heritage or any structure, site or thing. Where a VC is selected for more than one paragraph or subsection of section 5, the analysis is done only once. Building on the information gathered for the initial scoping, this phase of the assessment should include:

- A description of the nature and current condition of the heritage or any structure, site or thing;
- Assessment of the potential effects the project may likely cause to heritage or any structure, site or thing;
- Consideration of potential cumulative effects; and
- An analysis of the results of consultations held with the public and Aboriginal groups.

Important characteristics of these VCs may include the type of construction materials, the location of the land or resource, etc. A VC may already be affected by stressors caused by past and current activities. For example, adverse effects of acid rain may have already led to deterioration of a historic building. The designated project may lead to further changes in the environment or cumulative effects that may result in adverse environmental effects on the VCs. Examples of adverse effects on heritage or any structure, site or thing resulting from a change in the environment could include:

Change in the Environment	Effects on Lands and Resources
Land disturbance and transformation of natural landscapes (e.g., soil compaction, dredging, digging, filling, clearing, etc.)	<ul style="list-style-type: none"> <li>• Damage, disturbance or destruction in a conservation area.</li> <li>• Damage, disturbance or destruction of archaeological remains or sites, or spiritual sites.</li> </ul>
Effects of underground construction	<ul style="list-style-type: none"> <li>• Deterioration of an architectural or historic building or monument caused by vibration.</li> </ul>
Demolition or construction of buildings or other structures	<ul style="list-style-type: none"> <li>• Destruction of heritage buildings or archaeological sites.</li> <li>• Disturbance of the setting of heritage buildings, structures or sites.</li> </ul>

The methodologies used to predict environmental effects must be clearly described. With this information, reviewers will be able to examine the analysis and the rationale supporting the conclusions reached. Any assumptions or conclusions based on professional judgment should be clearly identified and described.

Data collection and/or generation are important components of an analysis of environmental effects. At times, it may be challenging to obtain or generate data to support the analysis. Potential environmental effects should be considered, as appropriate, in the analysis even when

there is little supporting data or there is predictive uncertainty. Reviewers of the EIS should be presented with a complete picture of the potential types and scale of environmental effects. In all cases, uncertainties and assumptions underpinning an analysis should be described and information sources clearly documented.

Scientific data and other evidence supporting an assessment of environmental effects can often be supplemented in various ways, including the use of data from other areas with comparable conditions.

Aboriginal traditional knowledge may provide important information on an Aboriginal group's connection to heritage or any structure, site or thing on a given landscape. Community knowledge and Aboriginal traditional knowledge available to the proponent should be incorporated into the assessment, in keeping with appropriate ethical standards and without breaking any applicable obligations of confidentiality.

### **Step 3. Identification of Mitigation Measures**

Technically and economically feasible measures must be identified that would mitigate any significant adverse environmental effects. Mitigation of environmental effects can take two forms:

- Elimination, reduction or control of a designated project's environmental effects is preferred.
- Where this is not possible, restitution for any damage to the environment caused by the environmental effect should be considered, e.g., replacement, restoration, compensation.

Both forms of mitigation can be considered in the decisions on whether a designated project is likely to cause significant adverse environmental effects.

A range of measures may be deployed to mitigate the effects of any changes to the environment on heritage or any structure, site or thing, including:

- Re-siting of the project to avoid sensitive areas such as significant sites or areas known to contain cultural artifacts, significant cultural landscapes, etc.;
- Changing the project design or construction techniques and technologies to reduce effects of the project on lands and resources;
- Implementing site protection such as stabilization practices, fences, etc.;
- Conducting professional rescue archaeology, also known as preservation of record, to salvage archaeological resources (in part or entirely) and their contextual information prior to undertaking physical activities associated with the designated project;
- Changing site maintenance practices causing damage to physical structures, e.g. eliminating use of road salt; and
- Cleaning up contaminated heritage buildings.

Effects on heritage or any structure, site or thing can be reversible (temporary) or irreversible (permanent). Given the nature of these VCs, the selection of mitigation measures often needs to address the possibility of irreversible effects (e.g., demolition of artifacts during construction activities).



## **Step 4. Determination of Whether a Project is Likely to Cause Significant Adverse Effects**

An EA must consider the significance of any adverse environmental effects that are likely to result from a designated project after taking into account the implementation of any mitigation measures.

Significance predictions in relation to the effects of any changes to the environment on heritage or any structure, site or thing should be clearly presented and rationalized against defined criteria consistent with the Agency's reference guide [Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects](#) (November 1994), or any future updates made to this document.

## **Step 5. Follow-up**

Follow-up programs should address project-specific environmental effects and cumulative environmental effects. The objectives of a follow-up program are to verify the accuracy of the EA and determine the effectiveness of any mitigation measures that have been implemented.

To help determine if follow-up is required in relation to heritage or any structure, site or thing, additional guidance is available through the Operational Policy Statement published by the Agency on [Follow up Programs under the Canadian Environmental Assessment Act](#) (December 2011), or any future updates to this document.

## **Publication Information**

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## Appendix 1: Reference sheet - Relevant Provisions of CEEA 2012

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### **Environmental Effects**

5. (1) For the purposes of this Act, the environmental effects that are to be taken into account in relation to an act or thing, a physical activity, a designated project or a project are:

- a. a change that may be caused to the following components of the environment that are within the legislative authority of Parliament:
  - i. fish as defined in section 2 of the [Fisheries Act](#) and fish habitat as defined in subsection 34(1) of that Act,
  - ii. aquatic species as defined in subsection 2(1) of the [Species at Risk Act](#),
  - iii. migratory birds as defined in subsection 2(1) of the [Migratory Birds Convention Act, 1994](#), and
  - iv. any other component of the environment that is set out in Schedule 2;
- b. a change that may be caused to the environment that would occur
  - i. on federal lands,
  - ii. in a province other than the one in which the act or thing is done or where the physical activity, the designated project or the project is being carried out, or
  - iii. outside Canada; and
- c. with respect to aboriginal peoples, an effect occurring in Canada of any change that may be caused to the environment on
  - i. health and socio-economic conditions,
  - ii. physical and cultural heritage,
  - iii. the current use of lands and resources for traditional purposes, or
  - iv. any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.

### **Exercise of power or performance of duty or function by federal authority**

(2) However, if the carrying out of the physical activity, the designated project or the project requires a federal authority to exercise a power or perform a duty or function conferred on it under any Act of Parliament other than this Act, the following environmental effects are also to be taken into account:

- a. a change, other than those referred to in paragraphs (1)(a) and (b), that may be caused to the environment and that is directly linked or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function that would permit the carrying out, in whole or in part, of the physical activity, the designated project or the project; and
- b. an effect, other than those referred to in paragraph (1)(c), of any change referred to in paragraph (a) on
  - i. health and socio-economic conditions,
  - ii. physical and cultural heritage, or
  - iii. any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.

### **Schedule 2**

(3) The Governor in Council may, by order, amend Schedule 2 to add or remove a component of the environment.

## **Factors to be Considered**

### **Factors**

**19.** (1) *The environmental assessment of a designated project must take into account the following factors:*

- a. *the environmental effects of the designated project, including the environmental effects of malfunctions or accidents that may occur in connection with the designated project and any cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out;*
- b. *the significance of the effects referred to in paragraph (a);*
- c. *comments from the public — or, with respect to a designated project that requires that a certificate be issued in accordance with an order made under section 54 of the [National Energy Board Act](#), any interested party — that are received in accordance with this Act;*
- d. *mitigation measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the designated project;*
- e. *the requirements of the follow-up program in respect of the designated project;*
- f. *the purpose of the designated project;*
- g. *alternative means of carrying out the designated project that are technically and economically feasible and the environmental effects of any such alternative means;*
- h. *any change to the designated project that may be caused by the environment;*
- i. *the results of any relevant study conducted by a committee established under section 73 or 74; and*
- j. *any other matter relevant to the environmental assessment that the responsible authority, or — if the environmental assessment is referred to a review panel — the Minister, requires to be taken into account.*

### **Scope of factors**

(2) *The scope of the factors to be taken into account under paragraphs (1)(a), (b), (d), (e), (g), (h) and (j) is determined by*

- a. *the responsible authority; or*
- b. *the Minister, if the environmental assessment is referred to a review panel.*

### **Community knowledge and Aboriginal traditional knowledge**

(3) *The environmental assessment of a designated project may take into account community knowledge and Aboriginal traditional knowledge.*

## **Environmental Assessment Decision**

### **Decisions of decision maker**

**52.** (1) *For the purposes of sections 27, 36, 47 and 51, the decision-maker referred to in those sections must decide if, taking into account the implementation of any mitigation measures that the decision-maker considers appropriate, the designated project*

- a. *is likely to cause significant adverse environmental effects referred to in subsection 5(1); and*
- b. *is likely to cause significant adverse environmental effects referred to in subsection 5(2).*

### **Referral if significant adverse environmental effects**

*(2) If the decision maker decides that the designated project is likely to cause significant adverse environmental effects referred to in subsection 5(1) or (2), the decision maker must refer to the Governor in Council the matter of whether those effects are justified in the circumstances.*

**Referral through Minister**

*(3) If the decision-maker is a responsible authority referred to in any of paragraphs 15(a) to (c), the referral to the Governor in Council is made through the Minister responsible before Parliament for the responsible authority.*

**Governor in Council's decision**

*(4) When a matter has been referred to the Governor in Council, the Governor in Council may decide*

- a. that the significant adverse environmental effects that the designated project is likely to cause are justified in the circumstances; or*
- b. that the significant adverse environmental effects that the designated project is likely to cause are not justified in the circumstances.*

## Appendix 2: Reference Sheet - Federal Involvement

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### *Key Federal Roles*

Jurisdiction over heritage is shared among levels of government. Heritage sites may be specifically designated as protected sites or may be subject to a blanket system of protection either by legislation or by policy at the federal, provincial, territorial or municipal level. In other cases, valuable heritage sites may not yet be known to government authorities (e.g., archaeological sites). Various mandates, objectives and intents of existing legislation and policies found at different levels of government should be considered when assessing heritage.

At the federal level, there are many parties involved in protecting heritage assets, notably:

- Parks Canada (PC) is responsible for managing national parks, national historic sites, national marine conservation areas, national urban parks, United Nations Educational, Scientific and Cultural Organization World Heritage Sites; and other protected heritage areas and heritage protection programs. In addition, Parks Canada also supports the designation work of the Historic Sites and Monuments Board of Canada.
- The Department of Canadian Heritage is responsible for developing policies governing certain aspects of cultural heritage (e.g., video, literature, art, etc.), including policies related to conserving, exporting and importing cultural property. Agencies within the Canadian Heritage portfolio, including national museums and affiliated museums, and Library and Archives Canada, also have specific mandates for the protection of federal heritage.
- The Treasury Board of Canada Secretariat (TBS) provides departments with direction on managing federal moveable heritage assets such as art, archaeological artifacts, and everyday objects that possess heritage value through the *Policy on Management of Material* and its associated *Guide to the Management of Moveable Heritage Assets, 2008*.
- The Federal Heritage Building Review Office (FHBRO) advises custodian departments on their obligations regarding heritage buildings under the TSB *Policy on Management of Real Property*.
- Canada's Historic Places (CHP), a federal, provincial and territorial initiative, maintains the Canadian Register of Historic Places (CRHP), which provides information about all historic places recognized for their heritage value at the local, provincial, territorial and national levels throughout Canada. As well, federal, provincial and territorial collaboration has led to the development of the *Standards and Guidelines for the Conservation of Historic Places in Canada, 2010*, which provides guidance to conserve four types of cultural resources (e.g., cultural landscapes, archaeological sites, buildings and engineering works).
- The Geological Survey of Canada provides expert advice for the identification and analysis of paleontological resources in Canada. As well, national collections of various specimens of vertebrate and plant fossils are maintained in their facilities.

Canada has also acceded and accepted some conventions from the United Nations Educational, Scientific and Cultural Organization (UNESCO). This means that Canada has made a commitment to uphold and implement these conventions. These conventions include:

- *Convention concerning the Protection of World Cultural and Natural Heritage, 1972*

United Nations Educational, Scientific and Cultural Organization (UNESCO). *Convention concerning the Protection of World Cultural and Natural Heritage*. 1972. (Online). Available at: <http://whc.unesco.org/en/conventiontext> [July 24, 2013].

- *Convention on Wetlands of International Importance, especially Waterfowl Habitat, 1971* United Nations Educational, Scientific and Cultural Organization (UNESCO). *Convention on Wetlands of International Importance, especially Waterfowl Habitat*. 1971. (Online). Available at: [http://www.ramsar.org/cda/en/ramsar-documents-texts-convention-on/main/ramsar/1-31-38%5E20671\\_4000\\_0](http://www.ramsar.org/cda/en/ramsar-documents-texts-convention-on/main/ramsar/1-31-38%5E20671_4000_0) [September 18, 2013].

## **Key Federal Definitions and Descriptions**

The Office of Auditor General (OAG) of Canada defines heritage as the “evidence of human experience that holds value to a particular group and is also a means of promoting and reinforcing cultural identity” (OAG, 2003). PC defines a cultural resource as “a human work or a place which gives evidence of human activity or has spiritual or cultural meaning, and which has been determined to have historic value” (PC, 2013).

PC defines heritage value as “the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations” (PC, 2013). This definition is included in the *Standards and Guidelines for the Conservation of Historical Places in Canada*, a document that has been adopted by a number of federal, provincial, territorial and municipal authorities. The term “significance” refers to the value placed on the resource and should not be confused with determining significance of effects in an EA context.

The heritage value of a resource is embodied in tangible and/or intangible character-defining elements. These elements include the materials, forms, location, spatial configurations, uses and cultural associations or meanings that embody the heritage value of a cultural resource, which must be retained to preserve that value (PC, 2013).

### **Examples of Resources with Heritage Value:**

- The Mackenzie King Estate has historical value because it was Prime Minister William Lyon Mackenzie King’s residence.
- The National Battlefield Park (Plains of Abraham) in Quebec City has historic value as the site of a number of battles between the English and the French for Canada in the eighteenth century.
- The Grand Lake in Algonquin Provincial Park has become an important site of national pride because of the famous painting by Tom Thompson, who inspired the formation of the Group of Seven.

The Government of Canada’s policies and programs generally divide physical and cultural heritage resources into three types:

- Built heritage resource: CHP provides various categories of built heritage, including cultural landscapes, archaeological sites, buildings, and engineering works (CHP, 2010).
- Moveable heritage resource: TBS defines moveable heritage as objects that have tangible evidence of human experience, such as artifacts, archives, printed material, cultural products, architectural heritage, and archaeology (TBS, 2008).



- Natural heritage resource: The *Convention Concerning the Protection of World Cultural and Natural Heritage, 1972* defines natural heritage as “natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation; and natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty” (UNESCO, 1972).

There may be other types of physical and cultural heritage resources that are not listed above.

<b>Example of Resources by Type</b>	
<b>Built Heritage</b>	<ul style="list-style-type: none"> <li>• Halifax Citadel in Nova Scotia;</li> <li>• Bethune-Thompson House in Ontario;</li> <li>• Quebec City’s walls and fortifications, Quebec;</li> <li>• Parliament Buildings in Ottawa, Ontario;</li> <li>• Archaeological sites along the Chilkoote Trail in British Columbia;</li> <li>• Wanuskewin Heritage Park in Saskatchewan;</li> <li>• Urban cultural landscape of Lunenburg, Nova Scotia;</li> <li>• Shipwreck sites in Red Bay, Labrador; and</li> <li>• Monumental poles (formerly referred to as "Totem poles") in Gwaii Haanas National Park, British Columbia.</li> </ul>
<b>Moveable Heritage</b>	<ul style="list-style-type: none"> <li>• Archaeological objects (e.g., arrow heads, harpoons, tools, agricultural implements, pipes, pottery, etc.);</li> <li>• Religious or sacred objects made or used by Aboriginal groups;</li> <li>• Archival and printed materials; and</li> <li>• Fossils.</li> </ul>
<b>Natural Heritage</b>	<ul style="list-style-type: none"> <li>• Fathom Five National Marine Park of Canada;</li> <li>• Canadian Rocky Mountain Parks;</li> <li>• Waterton Glacier International Peace Park;</li> <li>• Gros Morne National Park; and</li> <li>• Percé Rock in Gaspé.</li> </ul>

PC defines cultural landscapes as “any geographical area that has been modified, influenced, or given special cultural meaning by people, and that has been formally recognized for its heritage

value. Cultural landscapes are often dynamic, living entities that continually change because of natural and human-influenced social, economic and cultural processes” (Canada’s Historic Places. 2010). A widely accepted framework used in the *Standards and Guidelines for the Conservation of Historic Places in Canada* places cultural landscapes into three categories: designed; organically evolved (vernacular); and associative:

- *Designed cultural landscapes were intentionally created by human beings;*
- *Organically evolved cultural landscapes developed in response to social, economic, administrative or religious forces interacting with the natural environment. They fall into two sub-categories: Relict landscapes in which an evolutionary process came to an end. Its significant distinguishing features are, however, still visible in material form. Continuing landscapes in which the evolutionary process is still in progress. They exhibit significant material evidence of their evolution over time; and*
- *Associative cultural landscapes are distinguished by the power of their spiritual, artistic or cultural associations, rather than their surviving material evidence.*

## **Key Federal Policies and Guidance**

In addition to CEAA 2012, there are other vehicles to assist in the protection of heritage or any structure, site or thing. These consist of federal, provincial, territorial and municipal policies, guidance and/or legislation. Protection is also supported by international conventions mentioned above.

Some examples of other federal policies and guidance include:

- *Cultural Resource Management Policy, 2013 (PC):* The policy sets out the objective to manage cultural resources administered by Parks Canada in accordance with the following principles: Understanding Heritage Value, Sustainable Conservation and Benefits to Canadians.
- *Guidelines for the Management of Archaeological Resources, 2005 (PC):* These Guidelines present Parks Canada’s approach to archaeological resource management as a component of cultural resource management using the principles and practices of the Cultural Resource Management Policy. Archaeology on federal lands and lands underwater is within the jurisdiction of the Minister responsible for the Parks Canada Agency.
- *Policy on Management of Materiel, 2006 (TBS):* The objective of this policy is to ensure that materiel is managed by departments in a sustainable and financially responsible manner that supports the cost-effective and efficient delivery of government programs. It also sets out the requirements for Federal Heritage Buildings.
- *Guide to the Management of Moveable Heritage Assets, 2008 (TBS):* The guide provides departments with direction on managing federal moveable heritage assets such as art, archaeological artifacts, and everyday objects that possess heritage value. The guide stipulates that these assets are to be identified, their heritage value is to be assessed, and a record is to be kept that contains accurate information about their nature and condition.
- *Policy on Management of Real Property, 2006 (TBS):* The objective of this policy is to ensure real property is managed in a sustainable and financially responsible manner, throughout its life cycle, to support the cost-effective and efficient delivery of government programs.

Detailed information on how to access these instruments follows:

Canada's Historic Places. 2010. *Standards and Guidelines for the Conservation of Historic Places in Canada*. 2nd Ed. (Online). Available: <http://www.historicplaces.ca/en/pages/standards-normes.aspx> [July 25, 2013].

OAG. 2003. *2003 November Report of the Auditor General of Canada, Chapter 6 – Protection of Cultural Heritage in the Federal Government*. Ottawa. (Online). Available: [http://www.oag-bvg.gc.ca/internet/English/parl\\_oag\\_200311\\_06\\_e\\_12929.html](http://www.oag-bvg.gc.ca/internet/English/parl_oag_200311_06_e_12929.html) [July 24, 2013] Parks Canada (PC). 2013. *Cultural Resource Management Policy*. Ottawa. (Online). Available: <http://www.pc.gc.ca/docs/pc/poli/grc-crm/index.aspx> [July 24, 2013].

TBS. 2008. *Guide to the Management of Movable Heritage Assets*. Ottawa. (Online). Available: <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13872&section=text> [July 24, 2013].

TBS. 2006. *Policy on Management of Material*. Ottawa. (Online). Available: <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?section=text&id=12062> [September 18, 2013].

TBS. 2006. *Policy on Management of Real Property*. Ottawa. (Online). Available: <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12042&section=text> [November 12, 2013]

## Appendix 3: Reference Sheet - Generic Framework

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Generic step-wise framework

### Step 1: Initial Scoping



- Identification of VCs, including heritage or any structure site or thing; potential environmental effects; and spatial & temporal boundaries.

### Step 2: Analysis



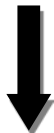
- Data collection or generation through means such as surveys, literature reviews, on-site testing, community knowledge and Aboriginal traditional knowledge, and a clear description of methods used to predict environmental effects.

### Step 3: Identification of Mitigation Measures



- Identification of technically and economically feasible measures to mitigate any significant adverse effects by reduction, elimination or control or, when these forms of mitigation are not possible, restitution measures such as replacement, restoration or compensation.

### Step 4: Determination of Whether a Project is likely to Cause Significant Adverse Effects



- Clearly presented predictions based on defined criteria to support conclusions about whether a project is likely to result in significant adverse effects, taking into account mitigation measures.

### Step 5: Follow-up

- Verification of the accuracy of the EA of a designated project and analysis of the effectiveness of mitigation measures.

These steps are iterative rather than linear; circumstances commonly arise during the course of an assessment that may require some steps to be revisited.